Interior Lighting Summary — LTG-SUM

2012 Washington State Energy Code Compliance Forms for Commercial Buildings including R2 & R3 over 3 stories and all R1 — Revised Jan 2014

Project Info			
Compliance forms do not require a password to use. *Instructional and calculating cells are write-*	Project Address	**23909 E. country Vista Dr.**	Date **10/19/2015**
		Liberty Lake, WA. 99019	For Building Department Use
	Applicant Name:	**Central Valley School District**	
	Applicant Address:	**19307 E. Cataldo Ave., Spokane Valley, WA 99016**	
	Applicant Phone:	**509-228-5400**	

Project Description

☑ New Building ☐ Addition ☐ Alteration ☐ Plans Included

Lighting Compliance Path

◉ Lighting Power Density Calculations ○ Total Building Performance

(If Total Building Performance then only LGT-CHK is required.)

Lighting Power Allowance Method *Selection required to enable LPA forms*

◉ Building Area Method ○ Space-By-Space Method

Interior Lighting System Description

Briefly describe lighting system type and features.

Additions and Change of Space Use (C101.4.3 & C101.4.4)

☐ Addition area or Change of Space Use area complies with all applicable provisions as stand alone project

☐ Addition area is combined with existing building lighting systems to demonstrate compliance with all applicable provisions per C101.4.3

Provide Building Area Method (LTG-INT-BLD) or Space-By-Space Method (LTG-INT-SPACE) Compliance Form. Document maximum allowed and proposed (including existing if applicable) lighting wattage of Addition or Change of Use space. Provide applicable lighting controls per C405.2 and commissioning of lighting controls per C405.13.

Alterations, Renovations and Repairs (C101.4.3.1)

☐ 60% or more of luminaires in space replaced

Provide Building Area Method (LTG-INT-BLD) or Space-By-Space Method (LTG-INT-SPACE) Compliance Form. Document maximum allowed wattage within the lighting retrofit space in Maximum Allowed Wattage table and proposed (including existing) lighting wattage in Proposed Wattage table. Retrofit and non-retrofit spaces shall be documented separately using multiple forms.

☐ Less than 60% of luminaires in space replaced

Provide a separate Space-By-Space Method (LTG-INT-SPACE) Compliance Form for this retrofit area. Document existing total wattage within the lighting retrofit space in cell provided in the Maximum Allowed Wattage table. Document proposed (including existing) lighting wattage in the Proposed Wattage table.

☐ Lamp and/or ballast replacement within existing luminaires only – existing total interior building wattage not increased

☐ New wiring installed to serve added fixtures and/or fixtures relocated to new circuit

Provide applicable manual lighting controls (C405.2.1), occupancy sensors (C405.2.2.2), daylight zone controls (C405.2.2.3), specific application controls (C405.2.3), and commissioning of lighting controls per C405.13

☐ New or moved lighting panel

Provide all applicable lighting controls as noted for New Wiring, automatic time switch controls (C405.2.2.1), and commissioning of lighting controls per C405.13.

☐ Space is reconfigured - luminaires unchanged or moved only

Provide all applicable lighting controls as noted for New Wiring and commissioning of lighting controls per C405.13.

☐ No changes are being made to the interior lighting and space use not changed.

Interior Lighting Summary - Building Area Method LTG-INT-BLD

2012 Washington State Energy Code Compliance Forms for Commercial Buildings including R2 & R3 over 3 stories and all R1 Revised Jan 2014

Project Address	23909 E. country Vista Dr.	Date	10/19/2015

Lighting Alterations, Renovations & Building Additions

For Building Department Use

○ Less than 60% ○ 60% or more ○ Stand alone ○ Addition

Notes:

a. Lighting fixtures in a building addition may comply as a stand alone project, or they may be combined with the overall existing bldg lighting to demonstrate compliance. Refer to C101.4.3.

b. For retrofits and building additions, provide Building Area types and gross interior areas in the Maximum Allowed Lighting table. If a builidng addition will comply as combined with the overall existing builidng, include all applicable existing Building Area types and gross interior areas.

c. Document new fixtures and all existing to remain fixtures in the Proposed Lighting table.

d. If less than 60% of existing fixtures will be replaced, use LTG-INT-SPACE form.

Maximum Allowed Lighting Wattage

Building Area*	Location (plan #, room #, or ALL)	Area Description	Allowed Watts per ft²	Gross Interior Area in ft²	Watts Allowed (watts/ft² x area)
School/university	Main Level	Classroom, Gym and Support Spaces	0.99	74349	73606

* *Select Table C405.5.2(1) Building Area from drop down menu.* Total 74349

Proposed Lighting Wattage

Building Area*	Location (plan #, room #)	Fixture Description**	Number of Fixtures	Watts/ Fixture	Watts Proposed
School/university		A03	4	30	120
School/university		A03F	18	30	540
School/university		A04	18	25	450
School/university		A04F	6	25	150
School/university		A06	15	47	705
School/university		B10	59	12	708
School/university		B15	37	19	703
School/university		B20	19	23	437
School/university		B21	5	14	70
School/university		B32	7	23	161
School/university		C24	53	28	1484
School/university		C54	5	27	135
School/university		D02-4	11	47	517
School/university		D02-12	12	141	1692
School/university		D04	3	18	54
School/university		D06	8	28	224
School/university		D08	8	37	296
School/university		D10	3	47	141
School/university		D10F	5	47	235
School/university		D12	5	55	275
School/university		D14	2	64	128
School/university		D16	2	74	148
School/university		D16F	1	74	74
School/university		D24	24	29	696
School/university		D26	6	41	246
School/university		D28	16	58	928
School/university		D28D	12	58	696
School/university		F01	6	4	24
School/university		F18	26	13	338
School/university		G01	26	192	4992
School/university		G02	4	241	964
School/university		R03	39	21	819
School/university		R04	15	21	315

School/university		R13	18	38	684
School/university		R23	12	38	456
School/university		R30	41	30	1230
School/university		R40	371	41	15211
School/university		T04	40	23	920
School/university		TR24A	2	440	880
School/university		X01	27	3	81
School/university		X02	2	3	6
School/university		X03	3	3	9

** Select Table C405.5.2(1) Building Area from drop down menu.*

*** Include existing to remain lighting and exempt lighting equipment per notes below.*

Compliance by Building Area

Building Area	Warnings	Total Allowed Watts	Total Proposed Watts	Interior Lighting Power Allowance
School/university	**Confirm all fixtures are reported under proposed lighting - low watts relative to maximum allowed.**	73606	38942	COMPLIES

Total	73606	38942

Notes:

1. *Proposed Wattage for each Building Area type shall not exceed the Allowed Wattage for that Building Area type. Trading wattage between Building Area types is not allowed under the Building Area Method compliance path.*
2. *Proposed fixtures must be listed in the building area in which they occur. Include ALL proposed lighting fixtures.*
3. *For proposed Fixture Description, indicate fixture type, lamp type (e.g. T-8), number of lamps in the fixture, and ballast type (if included). For track lighting, list the length of the track (in feet) in addition to the fixture, lamp, and ballast information.*
4. *For proposed Watts/Fixture, use manufacturer's listed maximum input wattage of the fixture (not simply the lamp wattage) and other criteria as specified in Section C405.5.1. For line voltage track lighting, list the greater of actual luminaire wattage or length of track multiplied by 50, or as applicable, the wattage of current limiting devices or of the transformer. For low voltage track lighting list the transformer rated wattage.*
5. *For lighting equipment eligible for exemption per C405.5.1, note exception number and leave Watts/Fixture blank.*
6. *Document existing to remain fixtures in Proposed Lighting table in the same manner as new fixtures. Identify as existing in fixture description.*

Exterior Lighting Summary — LTG-EXT

2012 Washington State Energy Code Compliance Forms for Commercial Buildings including R2 & R3 over 3 stories and all R1 — Revised Jan 2014

Project Info			
	Project Address:	**23909 E. country Vista Dr.**	Date 10/19/2015
		Liberty Lake, WA. 99019	For Building Department Use
	Applicant Name:	**Central Valley School District**	
	Applicant Addr:	**19307 E. Cataldo Ave., Spokane Valley, WA 99016**	
	Applicant Phone:	**509-228-5400**	

Project Description ☑ New Building ☐ Addition ☐ Alteration ☐ Plans Included

Lighting Zone *As specified by jurisdiction. Zone selection required to enable LTG-EXT form* ○ Zone 1 ○ Zone 2 ◉ Zone 3 ○ Zone 4

Compliance Option ◉ Lighting Power Density Calculations ○ Total Building Performance

Building Grounds *Applies to luminaires > 100 Watts* ☑ Efficacy > 60 lumens/W ☐ Controlled by motion sensor; ☐ Exemption (list) _____

Exterior Lighting Alterations ☐ No changes are being made to the existing exterior lighting; ☐ New wiring installed to serve added fixtures and/or fixtures relocated to new circuit. *Provide applicable exterior lighting controls per C405.2.4 and commissioning per*

Tradable Maximum Allowed Lighting Wattage

Base Site Allowance: 750

Tradable Surfaces	Surface Description	Allowed Watts per ft² or per lf	Area (ft²), perimeter (lf) or # of items	Allowed Watts x ft² (or x lf)
Uncovered Parking and drives	PARKING LOTS	0.10 W/ft2	101052	10105
Grounds Walkways <10 wide		0.8 W/LF	10213	8170
Grounds Walkways >10' wide		0.16 W/ft2	100	16

Total Allowed Tradable Watts: 18292

Tradable Proposed Lighting Wattage *(Use mfgr listed maximum input wattage for luminaire.)*

Tradable Surface	Fixture Description	Number of Fixtures	Watts/ Fixture	Watts Proposed
Uncovered Parking and drives	S02	5	130	650
Uncovered Parking and drives	S03	9	130	1170
Uncovered Parking and drives	S05	9	130	1170
Grounds Walkways >10' wide	S11	5	50	250
Grounds Walkways <10 wide	S13	11	72	792
Grounds Walkways >10' wide	S20	9	24	216
Grounds Walkways <10 wide	S21	9	19	171
Uncovered Parking and drives	S23	5	260	1300

Total proposed tradable watts may not exceed the sum of total allowed tradable watts plus the base site allowance. Any base site allowance not needed to make tradable watts comply can be applied to individual non-tradable categories.

Total Proposed Tradable Watts: 5719

Non-Tradable Maximum Allowed Lighting Wattage

Base Site Allowance Remaining: 750

Non-Tradable Surfaces	Surface Description	Allowed Watts per ft² or per lf	Area (ft²), perimeter (lf) or # of items	Allowed Watts x ft² (or x lf)

Non-Tradable Proposed Lighting Wattage

Non-Tradable Surface	Fixture Description	Number of Fixtures	Watts/ Fixture	Watts Proposed

Non-tradable proposed watts may not exceed allowed watts for any individual surface unless the total excess watts for all non-tradable surfaces are less than the remaining site allowance.

Total excess Non-Tradable watts: 0

Site Allowance Balance: 750

Exterior Lighting

COMPLIES WITH SITE ALLOWANCE

Lighting, Motor, and Transformer Permit Documents Checklist LTG-CHK

2012 Washington State Energy Code Compliance Forms for Commercial Buildings including R2 & R3 over 3 stories and all R1 — Revised Jan 2014

Project Address	23909 E. country Vista Dr.	Date	10/19/2015

The following information is necessary to check a permit application for compliance with the lighting, motor, and transformer requirements in the Washington State Energy Code, Commercial Provisions.

Applicability (yes,no,na)	Code Section	Component	Compliance information required in permit documents	Location in Documents	Building Department Notes
LIGHTING CONTROLS (Section C405.2)					
Yes	C405.2.1.1 C405.2.1.2	Manual interior lighting controls	Indicate on plans the manual control type & locations served;		
			Indicate of plans the 50% lighting load reduction method provided or identify exception taken	**Elec/Mech.**	
Yes	C405.2.2.1	Automatic time switch controls and override switching	Indicate lighting system automatic shut-off capability - identify lighting zone areas served on plans;	**Exterior/common. Corridor/custodian office**	
			Indicate locations of override switches on plans and the areas served, include area sq. ft.;		
			Indicate locations where automatic shutoff is provided by other methods (occupancy sensor, daylight controls, etc)		
Yes	C405.2.2.2	Occupancy sensors	Indicate on plans the locations served by occupancy sensors	**Classroom/ Office**	
Yes	C405.2.2.3	Daylight zones - Vertical fenestration and skylights	Indicate vertical fenestration primary and secondary daylight zone areas on plans, include sq. ft.;	**Classroom/Offices**	
			Indicate skylight daylight zone areas on plans, include sq. ft.		
Yes	C405.2.2.3.2	Daylight zone controls	Indicate on plans the locations served by daylight zone controls;	**E2 Series**	
			Indicate in plans the lighting load reduction (dimming) method - stepped or continuous dimming		
Yes	C405.2.3	Specific application lighting controls - General	Indicate on plans the locations served by specific application lighting controls	**Stage**	
Yes	C405.2.3 - Items 1&2	Display and accent lighting	Indicate lighting control method for display and accent lighting, and display case lighting;	**E2 Series**	
			Indicate these fixtures are controlled independently from both general area lighting and other lighting applications within the same space		
NA	C405.2.3 - Item 3	Hotel/motel guest rooms	Provide a lighting control device at each guest room entry for all permanently installed fixtures in guest room;		
			Indicated whether lighting control is manual or automatic		
Yes	C405.2.3 - Item 4	Supplemental task lighting	Provide automatic shut-off vacancy controls for supplemental task lighting, including under-shelf or under-cabinet lighting	**Classroom**	
NA	C405.2.3 - Item 5	Lighting for non-visual applications	Identify eligible non-visual applications and method of lighting control;		
			Indicate these fixtures are controlled independently from both general area lighting and other lighting applications within the same space		
NA	C405.2.3 - Item 6	Lighting equipment for sale or demonstration	Indicate lighting control method for lighting equipment for sale or demonstration;		
			Indicate these fixtures are controlled independently from both general area lighting and other lighting applications within the same space		
Yes	C405.2.3 - Item 7	Means of egress lighting	If egress lighting power density is greater than 0.05W/ft^2, indicate method of automatic shut-off during unoccupied periods;	**E2 Series**	
			Identify on plans the egress fixtures that function as both normal and emergency means of egress illumination		
Yes	C405.10 C405.11	Cooler and freezer lighting	Provide vacancy device or timer to turn off fixtures within 15 minutes of unoccupancy for cooler and freezer lighting fixtures with lamp efficacy less than 40 lumens per watt	**Equip. Manufacturer**	
Yes	C405.2.4	Exterior lighting controls	Indicate on exterior lighting plans the automatic lighting control method and locations served	**Mini Panels**	
No	C405.6.1	Exterior building grounds lighting controls	Provide motion sensor controls for building grounds fixtures rated at greater than 100 watts with lamp efficacy less than 60 lumens, or identify exception taken		
Yes	C408.3	Lighting system functional testing	Identify applicable commissioning documentation requirements per Section C408 or eligibility for exception;	**Specification**	
			Provide written procedures for functional testing of all automatic controls and describe the expected system response;		

Lighting, Motor, and Transformer Permit Documents Checklist LTG-CHK

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Project Address	**23909 E. country Vista Dr.**	Date	10/19/2015

The following information is necessary to check a permit application for compliance with the lighting, motor, and transformer requirements in the Washington State Energy Code, Commercial Provisions.

Applicability (yes,no,na)	Code Section	Component	Compliance information required in permit documents	Location in Documents	Building Department Notes
			Identify in construction documents the party responsible for functional testing of automatic lighting controls		
INTERIOR LIGHTING POWER & EFFICACY (Sections C405.5, C405.10, C405.11)					
Yes	C405.5.1 C405.5.1.1 C405.5.1.2 C405.5.1.3 C405.5.1.4	Total connected interior lighting power	Provide fixture schedule with fixture types, lamps, ballasts, and rated watts per fixture;		
			Identify spaces eligible for lighting power exemption on plans and in compliance forms;		
			Identify lighting equipment eligible for exemption in fixture schedule and in compliance forms;		
			Indicate that exempt lighting equipment is in addition to general area lighting and is controlled independently		
Yes	C405.4	Exit signs	Provide exit sign types and rated watts per fixture in fixture schedule (maximum 5 watts per fixture)		
No	C405.10 C405.11	Cooler and freezer lighting	For lighting in walk-in coolers and freezers, and refrigerated warehouse coolers and freezers, provide rated lamp efficacy (in lumens per watt) in fixture schedule		
	Lighting Power Calculation - Indicate compliance path taken				
Yes	C405.5.2	Building Area Method	Complete required compliance forms – proposed wattage per building area does not exceed maximum allowed wattage per building area. Identify locations of building areas on plans		
No	C405.5.2	Space-By-Space Method	Complete required compliance forms – total proposed wattage does not exceed maximum allowed wattage. Identify locations of space types on plans, including retail display areas as applicable		
EXTERIOR LIGHTING POWER & EFFICACY (Section C405.6)					
Yes	C405.6.2	Total connected exterior lighting power	Provide fixture schedule with fixture types, lamps, ballasts, and rated watts per fixture;		
			Identify exterior applications eligible for lighting power exemption on plans and in compliance forms;		
			Indicate that exempt exterior lighting is controlled independently from non-exempt exterior lighting		
Yes	Table C405.6.2(1)	Exterior lighting zone	Indicate building exterior lighting zone as defined by the AHJ		
Yes	C405.6.1	Exterior building grounds lighting	For building grounds fixtures rated at greater than 100 watts, provide rated lamp efficacy (in lumens per watt) in fixture schedule		
Yes	C405.6.2	Exterior lighting power calculations	Complete required compliance form – proposed wattage for exterior lighting plus base site allowed does not exceed maximum allowed		
MOTORS & TRANSFORMERS (Sections C405.8, C405.9)					
Yes	C405.8	Electric Motors	For motors not part of an HVAC system, provide electric motor schedule on electrical plans with hp, rpm, and rated efficiency		
Yes	C405.9	Transformers	Provide distribution transformer schedule on electrical plans with transformer size and efficiency		

If "no" is selected for any question, provide explanation:

Date: 10/09/2015
Drawn by: DL
Checked by: DS/SK
Scale: AS NOTED
File No: 12.23
Sheet No: E0.01A

MMEC
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SITE LIGHTING CALCULATIONS
LIBERTY CREEK ELEMENTARY SCHOOL
23909 EAST COUNTRY VISTA DRIVE
LIBERTY LAKE, WA 99019

STEPHEN H. HELMAN
STATE OF WASHINGTON
19734
REGISTERED PROFESSIONAL ENGINEER

DEI
Electrical Consultants
2205 N. Woodruff Rd. Suite 5
Spokane Valley, WA 99206
phone 509.747.5139
fax 509.623.1555

REVISIONS

PARKING LOTS/BUS DROP OFF

D-Series Size 1
LED Area Luminaire

Catalog Number

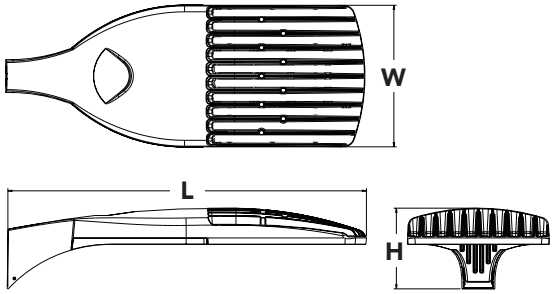
Notes

Type S0X Series

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.2 ft² (0.11 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height:	7-1/2" (19.0 cm)
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing 100 – 400W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED 60C 1000 40K T3M MVOLT SPA DDBXD

DSX1LED

Series

DSX1 LED

LEDs

Forward optics

30C 30 LEDs (one engine)
40C 40 LEDs (two engines)
60C 60 LEDs (two engines)

Rotated optics [1]

60C 60 LEDs (two engines)

Drive current

530 530 mA
700 700 mA
1000 1000 mA (1 A)

Color temperature

30K 3000 K
40K 4000 K
50K 5000 K
AMBPC Amber phosphor converted [2]

Distribution

T1S Type I Short
T2S Type II Short
T2M Type II Medium
T3S Type III Short
T3M Type III Medium
T4M Type IV Medium
TFTM Forward Throw Medium
T5VS Type V Very Short
T5S Type V Short
T5M Type V Medium
T5W Type V Wide

Voltage

MVOLT [3]
120 [3]
208 [3]
240 [3]
277 [3]
347 [4]
480 [4]

Mounting

Shipped included

SPA Square pole mounting
RPA Round pole mounting
WBA Wall bracket
SPUMBA Square pole universal mounting adaptor [5]
RPUMBA Round pole universal mounting adaptor [5]

Shipped separately

KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) [6]

Control options

Shipped installed

PER NEMA twist-lock receptacle only (no controls) [7]
PER5 Five-wire receptacle only (no controls) [7,8]
PER7 Seven-wire receptacle only (no controls) [7,8]
DMG 0-10V dimming driver (no controls) [9]
DCR Dimmable and controllable via ROAM® (no controls) [10]
DS Dual switching [11,12]
PIR Motion sensor, 8-15' mounting height [13]
PIRH Motion sensor, 15-30' mounting height [13]
BL30 Bi-level switched dimming, 30% [12,14]
BL50 Bi-level switched dimming, 50% [12,14]
PNMTDD3 Part night, dim till dawn [15]
PNMT5D3 Part night, dim 5 hrs [15]
PNMT6D3 Part night, dim 6 hrs [15]
PNMT7D3 Part night, dim 7 hrs [15]

Other options

Shipped installed

HS House-side shield [16]
WTB Utility terminal block [17]
SF Single fuse (120, 277, 347V) [18]
DF Double fuse (208, 240, 480V) [18]
L90 Left rotated optics [19]
R90 Right rotated optics [19]

Finish *(required)*

DDBXD Dark bronze
DBLXD Black
DNAXD Natural aluminum
DWHXD White
DDBTXD Textured dark bronze
DBLBXD Textured black
DNATXD Textured natural aluminum
DWHGXD Textured white

Accessories

Ordered and shipped separately.

Controls & Shields

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [20]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [20]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [20]
SC U	Shorting cap [20]
DSX1HS 30C U	House-side shield for 30 LED unit
DSX1HS 40C U	House-side shield for 40 LED unit
DSX1HS 60C U	House-side shield for 60 LED unit
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish)
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [6]

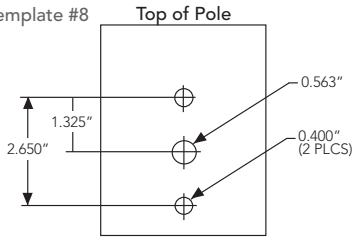
For more control options, visit DTL and ROAM online.

NOTES

1 Rotated optics available with 60C only.
2 AMBPC only available with 530mA or 700mA.
3 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120V, 208V, 240V or 277V options only when ordering with fusing (SF, DF options).
4 Not available with single board, 530mA product (30C 530 or 60C 530 DS). Not available with BL30, BL50 or PNMT options.
5 Available as a separate combination accessory: PUMBA (finish) U; 1.5 G vibration load rating per ANCI C136.31.
6 Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
7 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option.
8 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR.
9 DMG option for 347V or 480V requires 1000mA.
10 Specifies a ROAM® enabled luminaire with 0-10V dimming capability; PER option required. Additional hardware and services required for ROAM® deployment; must be purchased separately. Call 1-800-442-6745 or email: sales@roamservices.net. N/A with DS, PIR, PIRH, PER5, PER7, BL30, BL50 or PNMT options.
11 Requires 40C or 60C. Provides 50/50 luminaire operation via two independent drivers on two separate circuits. N/A with PER, DCR, WTB, PIR or PIRH.
12 Requires an additional switched circuit.
13 PIR specifies the SensorSwitch SBGR-10-ODP control; PIRH specifies the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard. Not available with DS, PER5 or PER7.
14 Dimming driver standard. MVOLT only. Not available with 347V, 480V, DCR, DS, PER5, PER7 or PNMT options.
15 Dimming driver standard. MVOLT only. Not available with 347V, 480V, DCR, DS, PER5, PER7, BL30 or BL50.
16 Also available as a separate accessory; see Accessories information.
17 WTB not available with DS.
18 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
19 Available with 60 LEDs (60C option) only.
20 Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Controls.

Drilling

Template #8



DSX1 shares a unique drilling pattern with the AERIS™ family. Specify this drilling pattern when specifying poles, per the table below.

DM19AS	Single unit	**DM29AS**	2 at 90° *
DM28AS	2 at 180°	**DM39AS**	3 at 90° *
DM49AS	4 at 90° *	**DM32AS**	3 at 120° **

Example: SSA 20 4C **DM19AS** DDBXD

Visit Lithonia Lighting's POLES CENTRAL to see our wide selection of poles, accessories and educational tools.
**Round pole top must be 3.25" O.D. minimum.*
***For round pole mounting (RPA) only.*

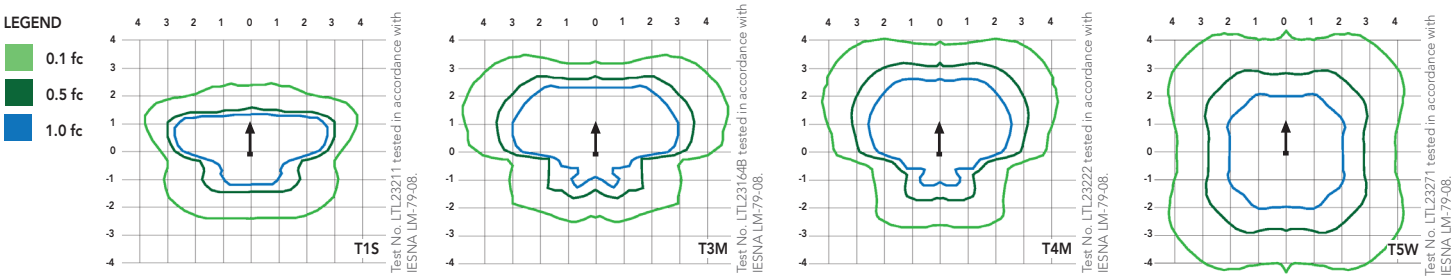
Tenon Mounting Slipfitter **

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (20').



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Electrical Load

			Current (A)					
Number of LEDs	Drive Current (mA)	System Watts	120	208	240	277	347	480
30	530	52	0.52	0.30	0.26	0.23	--	--
	700	68	0.68	0.39	0.34	0.30	0.24	0.17
	1000	105	1.03	0.59	0.51	0.45	0.36	0.26
40	530	68	0.67	0.39	0.34	0.29	0.23	0.17
	700	89	0.89	0.51	0.44	0.38	0.31	0.22
	1000	138	1.35	0.78	0.67	0.58	0.47	0.34
60	530	99	0.97	0.56	0.48	0.42	0.34	0.24
	700	131	1.29	0.74	0.65	0.56	0.45	0.32
	1000	209	1.98	1.14	0.99	0.86	0.69	0.50

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSX1 LED 60C 1000			
	1.0	0.95	0.93	0.88
	DSX1 LED 60C 700			
	1.0	0.99	0.98	0.96

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30C (30 LEDs)	700 mA	68 W	T1S	5,697	1	0	1	84	7,127	2	0	2	105	7,180	2	0	2	106	4,561	1	0	1	67
			T2S	5,967	2	0	2	88	7,465	2	0	2	110	7,521	2	0	2	111	4,777	1	0	1	70
			T2M	5,773	1	0	2	85	7,222	2	0	2	106	7,276	2	0	2	107	4,622	1	0	2	68
			T3S	5,901	1	0	2	87	7,382	2	0	2	109	7,437	2	0	2	109	4,724	1	0	1	69
			T3M	5,872	1	0	2	86	7,346	2	0	2	108	7,401	2	0	2	109	4,701	1	0	2	69
			T4M	5,882	1	0	2	87	7,359	2	0	2	108	7,414	2	0	2	109	4,709	1	0	2	69
			TFTM	5,793	1	0	2	85	7,247	1	0	2	107	7,301	1	0	2	107	4,638	1	0	2	68
			T5VS	6,148	2	0	0	90	7,691	3	0	1	113	7,749	3	0	1	114	4,922	2	0	0	72
			T5S	6,074	2	0	0	89	7,598	3	0	0	112	7,655	3	0	0	113	4,863	2	0	0	72
			T5M	6,150	3	0	1	90	7,694	3	0	2	113	7,752	3	0	2	114	4,924	3	0	1	72
			T5W	5,979	3	0	1	88	7,479	3	0	2	110	7,536	3	0	2	111	4,787	3	0	1	70
	1000 mA	105 W	T1S	7,913	2	0	2	75	9,899	2	0	2	94	9,973	2	0	2	95					
			T2S	8,288	2	0	2	79	10,368	2	0	2	99	10,446	2	0	2	99					
			T2M	8,019	2	0	2	76	10,031	2	0	3	96	10,106	2	0	3	96					
			T3S	8,196	2	0	2	78	10,253	2	0	2	98	10,330	2	0	2	98					
			T3M	8,156	2	0	2	78	10,202	2	0	2	97	10,279	2	0	2	98					
			T4M	8,170	2	0	2	78	10,220	2	0	2	97	10,297	2	0	2	98					
			TFTM	8,046	2	0	2	77	10,065	2	0	3	96	10,141	2	0	3	97					
			T5VS	8,539	3	0	1	81	10,682	3	0	1	102	10,762	3	0	1	102					
			T5S	8,436	3	0	1	80	10,553	3	0	1	101	10,632	3	0	1	101					
			T5M	8,542	3	0	2	81	10,686	4	0	2	102	10,766	4	0	2	103					
			T5W	8,304	3	0	2	79	10,388	4	0	2	99	10,466	4	0	2	100					
40C (40 LEDs)	700 mA	89 W	T1S	7,511	2	0	2	84	9,396	2	0	2	106	9,467	2	0	2	90	6,014	1	0	1	68
			T2S	7,868	2	0	2	88	9,842	2	0	2	111	9,916	2	0	2	94	6,299	2	0	2	71
			T2M	7,612	2	0	2	86	9,522	2	0	3	107	9,594	2	0	3	91	6,094	2	0	2	68
			T3S	7,780	2	0	2	87	9,733	2	0	2	109	9,806	2	0	2	93	6,229	1	0	2	70
			T3M	7,742	2	0	2	87	9,685	2	0	2	109	9,758	2	0	2	93	6,198	2	0	2	70
			T4M	7,756	2	0	2	87	9,702	2	0	2	109	9,775	2	0	2	93	6,209	1	0	2	70
			TFTM	7,638	2	0	2	86	9,555	2	0	2	107	9,627	2	0	2	92	6,115	1	0	2	69
			T5VS	8,106	3	0	1	91	10,140	3	0	1	114	10,216	3	0	1	97	6,490	2	0	0	73
			T5S	8,008	3	0	1	90	10,017	3	0	1	113	10,093	3	0	1	96	6,411	2	0	0	72
			T5M	8,109	3	0	2	91	10,144	4	0	2	114	10,220	4	0	2	97	6,492	3	0	1	73
			T5W	7,883	3	0	2	89	9,861	4	0	2	111	9,936	4	0	2	95	6,311	3	0	2	71
	1000 mA	138 W	T1S	10,384	2	0	2	75	12,990	3	0	3	94	13,088	3	0	3	95					
			T2S	10,876	2	0	2	79	13,606	3	0	3	99	13,708	3	0	3	99					
			T2M	10,523	2	0	3	76	13,164	3	0	3	95	13,263	3	0	3	96					
			T3S	10,756	2	0	2	78	13,455	2	0	2	97	13,556	3	0	3	98					
			T3M	10,703	2	0	2	78	13,389	3	0	3	97	13,490	3	0	3	98					
			T4M	10,722	2	0	2	78	13,412	3	0	3	97	13,513	3	0	3	98					
			TFTM	10,559	2	0	3	77	13,209	2	0	3	96	13,308	2	0	3	96					
			T5VS	11,206	3	0	1	81	14,018	4	0	1	102	14,124	4	0	1	102					
			T5S	11,070	3	0	1	80	13,848	3	0	1	100	13,953	3	0	1	101					
			T5M	11,210	4	0	2	81	14,023	4	0	2	102	14,129	4	0	2	102					
			T5W	10,898	4	0	2	79	13,633	4	0	2	99	13,735	4	0	2	100					
60C (60 LEDs)	700 mA	131 W	T1S	11,182	2	0	2	81	13,988	3	0	3	101	14,093	3	0	3	102	8,952	2	0	2	68
			T2S	11,712	3	0	3	85	14,651	3	0	3	106	14,761	3	0	3	107	9,377	2	0	2	72
			T2M	11,332	2	0	3	82	14,175	3	0	3	103	14,282	3	0	3	103	9,072	2	0	2	69
			T3S	11,582	2	0	2	84	14,489	3	0	3	105	14,598	3	0	3	106	9,273	2	0	2	71
			T3M	11,525	2	0	2	84	14,418	3	0	3	104	14,526	3	0	3	105	9,227	2	0	2	70
			T4M	11,546	2	0	2	84	14,443	3	0	3	105	14,552	3	0	3	105	9,243	2	0	2	71
			TFTM	11,370	2	0	3	82	14,224	2	0	3	103	14,331	2	0	3	104	9,103	2	0	2	69
			T5VS	12,067	3	0	1	87	15,095	4	0	1	109	15,209	4	0	1	110	9,661	3	0	1	74
			T5S	11,921	3	0	1	86	14,913	4	0	1	108	15,025	4	0	1	109	9,544	3	0	1	73
			T5M	12,071	4	0	2	87	15,101	4	0	2	109	15,214	4	0	2	110	9,665	3	0	2	74
			T5W	11,735	4	0	2	85	14,680	4	0	2	106	14,791	4	0	2	107	9,395	4	0	2	72
	1000 mA	209 W	T1S	15,307	3	0	3	73	19,148	3	0	3	92	19,292	3	0	3	92					
			T2S	16,033	3	0	3	77	20,056	3	0	3	96	20,207	3	0	3	97					
			T2M	15,512	3	0	3	74	19,405	3	0	3	93	19,551	3	0	3	94					
			T3S	15,855	3	0	3	76	19,834	3	0	3	95	19,983	3	0	3	96					
			T3M	15,777	3	0	3	75	19,736	3	0	4	94	19,885	3	0	4	95					
			T4M	15,805	3	0	3	76	19,771	3	0	4	95	19,920	3	0	4	95					
			TFTM	15,565	3	0	3	74	19,471	3	0	4	93	19,617	3	0	4	94					
			T5VS	16,519	4	0	1	79	20,664	4	0	1	99	20,820	4	0	1	100					
			T5S	16,319	4	0	1	78	20,414	4	0	1	98	20,567	4	0	1	98					
			T5M	16,525	4	0	2	79	20,672	5	0	3	99	20,827	5	0	3	100					
			T5W	16,065	4	0	3	77	20,096	5	0	3	96	20,247	5	0	3	97					

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.2 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 4000 K (70 minimum CRI) or optional 3000 K (80 minimum CRI) or 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of 30, 40 or 60 high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L96/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV or 6kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern. Optional terminal block, tool-less entry, and NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
Five-year limited warranty. Full warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

SENTINALL™

S1414D SERIES

PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

TYPE S11

CLASSROOM WING ENTRY SOFFITS

PRODUCT FEATURES:

» Surface ceiling mount – 14"W×14"W×5"D

» 18-gauge cold rolled steel baseplate

» UV-stabilized, injection molded polycarbonate lens

» Stainless steel Torx® fasteners

SPECIFICATIONS

BASEPLATE: 18-gauge CRS. Baseplate provided with four-point mounting holes, one wireway hole and junction box mounting keyholes – see Cross Section/Details. White TGIC polyester powder coat – 5-stage pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%. See Options or Accessories for marine grade aluminum baseplate (AL) and/or CRS or aluminum surface adapter.

LENS/HOUSING: One-piece wraparound lens/housing (UV-stabilized, high impact, virgin injection molded polycarbonate). High efficiency Pearlescent or Clear Prismatic lens. Housing available in matte white or dark bronze finish.

REFLECTOR: Compact Fluorescent/LED: Full reflector/wire cover – white finished aluminum (92% reflectivity). HID: Full reflector/wire cover. High efficiency textured aluminum.

GASKET: Die-cut closed cell neoprene gasket seals lens/housing to mounting surface.

HARDWARE: Two stainless steel Torx® with center pin fasteners secure lens/housing to baseplate.

ELECTRICAL: Fluorescent electronic 120/277/347 and multi voltage ballasts high power factor (<10% THD). HPS: Normal power factor standard. See Options for high power factor ballasts. LED: Replaceable high-brightness ANSI 3500K (80 CRI min.), 4000K (70 CRI min.), 5000K (70 CRI min.) or 5700K (70 CRI min.) white LED array. 120-277VAC, high power factor electronic driver. LED dimming capability controlled through compatible 0-10V dimmer (supplied by others); 10-100% dimming range. See options for higher CRI lamp availability. Metal Halide: High power factor standard.

INSTALLATION: Standard four-point mounting required for Peace of Mind Guarantee®.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For additional photometric data, please go to www.kenall.com.

WARRANTY: One (1) year warranty against defects in materials and workmanship. Five (5) year warranty on LED lamps and driver for defects resulting in a fixture lumen depreciation of 30% or greater.

LISTINGS: Luminaire is certified to UL Standards by either Underwriters Laboratory or Intertek Testing Laboratory for Wet Location – covered ceiling mount.

LED | PEACE OF MIND Guarantee® | c UL us | c ETL us

ORDERING INFORMATION (Ex: S1414D-C-DB-50L40K-1-DV)

Model	Lens Type	Finish	Lamp Type	Lamp Qty	Voltage	Options	Accessories
S1414D							

Lens Type

C	Clear Prismatic
P	Pearlescent

Finish

DB	Dark Bronze
MW	Matte White

Lamp (Qty/Ballast/Volt./Starting Temp)

50L35K	50W 3500K LED (1/DCC/120-277V/-40°F)
50L40K	50W 4000K LED (1/DCC/120-277V/-40°F)
50L50K	50W 5000K LED (1/DCC/120-277V/-40°F)
50L57K	50W 5700K LED (1/DCC/120-277V/-40°F)
7	7 Watt Twin (1,2,3/MB/120,277/0°F)
9	9 Watt Twin (1,2,3/MB/120,277/0°F)
13	13 Watt Twin (1,2,3/MB/120,277/32°F)
13Q	13 Watt Quad (1,2/RS/120,277/0°F)
18Q	18 Watt Quad (1,2/RS/120,277/0°F)
26Q	26 Watt Quad (1,2/RS/120,277/0°F)
28D	28 Watt 2D (1/RS/120,277/0°F)
38D	38 Watt 2D (1/RS/120,277/0°F)
32P	32 Watt PLT (1,2/RS/120,277/0°F)
42P	42 Watt PLT (1/RS/120,277/0°F)
35S	35 Watt HPS (1/NPF/120,277/-40°F)
50M†	50 Watt MH (1/HPF/120,277/-20°F)
50S	50 Watt HPS (1/NPF/120,277/-40°F)
70S	70 Watt HPS (1/NPF/120,277/-40°F)

Lamp Quantity *

1	One Lamp
2	Two Lamps
3	Three Lamps

Voltage

120	120 Volts
277	277 Volts
DV	120-277 Volts, electronic ballasts or LED only

Options

EL	One-Lamp Indoor Battery Pack (32°F) (n/a with HID or LED Lamp)
CEL	Cold Weather Emergency Battery Pack
10KV	IEEE C62.41.2 C High Surge Protector (LED only)
AL	Marine Grade Aluminum Baseplate
FS	Single Fuse & Holder
HPF	High Power Factor Ballast (HPS only)
R80	Minimum 80 CRI (4000K LED only)
RWK	Retrofit Wiring Kit – Medium Base Socket (9143) (120 Volt only)

Accessories

ASA	Aluminum Surface Adapter
SA	Surface Adapter (CRS)
9500	Torx® Screwdriver

† UV shielding lamp supplied

* See Lamp Type for availability

KENALL®

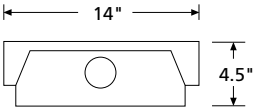
www.kenall.com **P: 800-4-Kenall** **F: 847-360-1781** **1020 Lakeside Drive Gurnee, Illinois 60031**

SENTINALL™

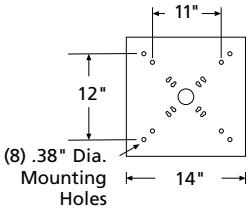
S1414D SERIES

DIMENSIONAL DATA

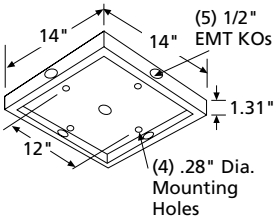
CROSS SECTION



BASEPLATE (CRS OR AL)



SURFACE ADAPTER (SA)



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D-Series Size 0
LED Area Luminaire

Catalog Number

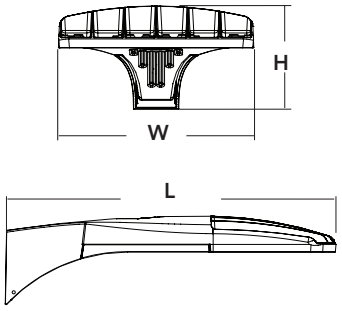
Notes

Type S13

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.8 ft² (.07 m²)
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height:	7" (17.8 cm)
Weight (max):	16 lbs (7.25 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED 40C 1000 40K T3M MVOLT SPA DDBXD

DSX0 LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** 20C 20 LEDs (one engine) 40C 40 LEDs (two engines) **Rotated optics**[1] 30C 30 LEDs (one engine)	530 530 mA 700 700 mA 1000 1000 mA (1 A)[2]	30K 3000 K 80 CRI min.) 40K 4000 K (70 CRI min.) 50K 5000 K (70 CRI) AMBPC Amber phosphor converted[3]	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide	MVOLT[4] 120[4] 208[4] 240[4] 277[4] 347[5] 480[5]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[6] RPUMBA Round pole universal mounting adaptor[6] **Shipped separately**[7] KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)

Control options

Shipped installed

PER	NEMA twist-lock receptacle only (no controls)[8]
PER5	Five-wire receptacle only (no controls)[8,9]
PER7	Seven-wire receptacle only (no controls)[8,9]
DMG	0-10V dimming driver (no controls)[10]
DCR	Dimmable and controllable via ROAM® (no controls)[11]
PIR	Motion sensor, 8-15' mounting height[12]
PIRH	Motion sensor, 15-30' mounting height[12]
BL30	Bi-level switched dimming, 30%[13,14]
BL50	Bi-level switched dimming, 50%[13,14]
PNMTDD3	Part night, dim till dawn[15]
PNMT5D3	Part night, dim 5 hrs[15]
PNMT6D3	Part night, dim 6 hrs[15]
PNMT7D3	Part night, dim 7 hrs[15]

Other options

Shipped installed

HS	House-side shield[16]
SF	Single fuse (120, 277, 347V)[17]
DF	Double fuse (208, 240, 480V)[17]
L90	Left rotated optics[1]
R90	Right rotated optics[1]
DDL	Diffused drop lens[16]

Finish *(required)*

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

Accessories

Ordered and shipped separately.

Controls & Shields

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V)[18]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V)[18]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V)[18]
SC U	Shorting cap[18]
DSX0HS 20C U	House-side shield for 20 LED unit[16]
DSX0HS 30C U	House-side shield for 30 LED unit[16]
DSX0HS 40C U	House-side shield for 40 LED unit[16]
DSX0DDL U	Diffused drop lens (polycarbonate)[16]
PUMBA DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish)
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish)[7]

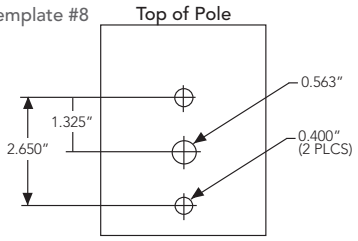
For more control options, visit DTL and ROAM online.

NOTES

1. 30 LEDs (30C option) and rotated options (L90 or R90) only available together.
2. 1000mA not available with AMBPC.
3. AMBPC only available with 530mA or 700mA.
4. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120V, 208V, 240V or 277V options only when ordering with fusing (SF, DF options).
5. Not available with single board, 530mA product (20C 530 or 30C 530). Not available with BL30, BL50 or PNMT options.
6. Available as a separate combination accessory: PUMBA (finish) U; 1.5 G vibration load rating per ANCI C136.31.
7. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
8. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories.
9. If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR.
10. DMG option for 347V or 480V requires 1000mA.
11. Specifies a ROAM® enabled luminaire with 0-10V dimming capability; PER option required. Additional hardware and services required for ROAM® deployment; must be purchased separately. Call 1-800-442-6745 or email: sales@roamservices.net. N/A with PIR, PIRH, PER5, PER7, BL30, BL50 or PNMT options.
12. PIR specifies the SensorSwitch SBGR-10-ODP control; PIRH specifies the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard. Not available with PER5 or PER7.
13. Requires an additional switched circuit.
14. Dimming driver standard. MVOLT only. Not available with 347V, 480V, DCR, PER5, PER7 or PNMT options.
15. Dimming driver standard. MVOLT only. Not available with 347V, 480V, DCR, PER5, PER7, BL30 or BL50.
16. Also available as a separate accessory; see Accessories information.
17. Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
18. Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Controls.

Drilling

Template #8



DSX0 shares a unique drilling pattern with the AERIS™ family. Specify this drilling pattern when specifying poles, per the table below.

DM19AS	Single unit	**DM29AS**	2 at 90° *
DM28AS	2 at 180°	**DM39AS**	3 at 90° *
DM49AS	4 at 90° *	**DM32AS**	3 at 120° **

Example: SSA 20 4C **DM19AS** DDBXD

Visit Lithonia Lighting's POLES CENTRAL to see our wide selection of poles, accessories and educational tools.

*Round pole top must be 3.25" O.D. minimum.

**For round pole mounting (RPA) only.

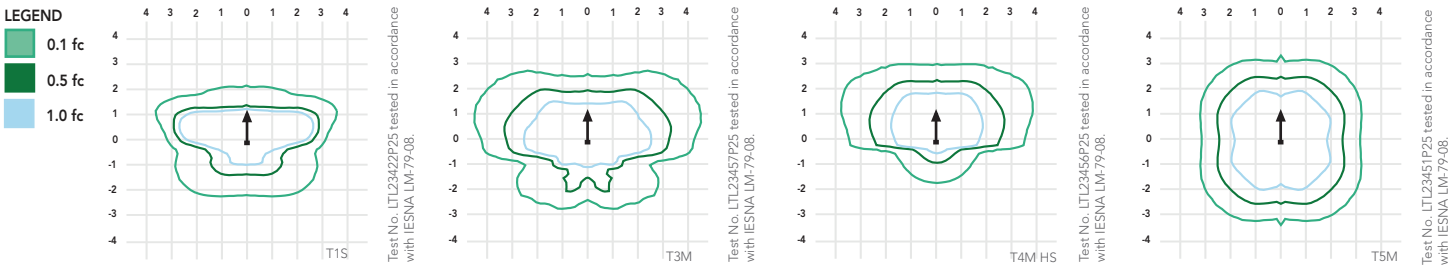
Tenon Mounting Slipfitter **

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area homepage.

Isofootcandle plots for the DSX0 LED 40C 1000 40K. Distances are in units of mounting height (20').



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Electrical Load

			Current (A)					
Number of LEDs	Drive Current (mA)	System Watts	120	208	240	277	347	480
20C	530	35	0.34	0.22	0.21	0.20	--	--
	700	45	0.47	0.28	0.24	0.22	0.18	0.14
	1000	72	0.76	0.45	0.39	0.36	0.36	0.26
30C	530	52	0.51	0.31	0.28	0.25	--	--
	700	70	0.72	0.43	0.37	0.34	0.25	0.19
	1000	104	1.11	0.64	0.56	0.49	0.47	0.34
40C	530	68	0.71	0.41	0.36	0.33	0.25	0.19
	700	91	0.94	0.55	0.48	0.42	0.33	0.24
	1000	138	1.45	0.84	0.73	0.64	0.69	0.50

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSX0 LED 20C 1000			
	1	0.97	0.94	0.90
	DSX0 LED 40C 1000			
	1	0.94	0.90	0.84
	DSX0 LED 40C 700			
	1	0.99	0.98	0.96

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
20C (20 LEDs)	530 mA	35 W	T1S	3,174	1	0	1	91	3,971	1	0	1	113	4,001	1	0	1	114	2,541	1	0	1	73
			T2S	3,234	1	0	1	92	4,045	1	0	1	116	4,075	1	0	1	116	2,589	1	0	1	74
			T2M	3,171	1	0	1	91	3,967	1	0	1	113	3,997	1	0	1	114	2,539	1	0	1	73
			T3S	3,195	1	0	1	91	3,997	1	0	1	114	4,027	1	0	1	115	2,558	1	0	1	73
			T3M	3,226	1	0	1	92	4,036	1	0	1	115	4,066	1	0	1	116	2,583	1	0	1	74
			T4M	3,210	1	0	1	92	4,015	1	0	1	115	4,045	1	0	1	116	2,570	1	0	1	73
			TFTM	3,173	1	0	1	91	3,969	1	0	2	113	3,999	1	0	2	114	2,540	1	0	1	73
			T5VS	3,310	2	0	0	95	4,140	2	0	0	118	4,172	2	0	0	119	2,650	1	0	0	76
			T5S	3,360	2	0	2	96	4,203	2	0	0	120	4,235	2	0	0	121	2,690	1	0	0	77
			T5M	3,320	2	0	1	95	4,153	3	0	1	119	4,184	3	0	1	120	2,658	2	0	0	76
			T5W	3,327	3	0	1	95	4,161	3	0	1	119	4,193	3	0	1	120	2,663	2	0	1	76
	700 mA	45 W	T1S	3,927	1	0	1	87	4,913	1	0	1	109	4,950	1	0	1	110	3,144	1	0	1	70
			T2S	4,000	1	0	1	89	5,004	1	0	1	111	5,042	1	0	1	112	3,203	1	0	1	71
			T2M	3,924	1	0	1	87	4,908	1	0	1	109	4,945	1	0	1	110	3,141	1	0	1	70
			T3S	3,953	1	0	1	88	4,945	1	0	1	110	4,982	1	0	1	111	3,165	1	0	1	70
			T3M	3,991	1	0	1	89	4,994	1	0	2	111	5,031	1	0	2	112	3,196	1	0	1	71
			T4M	3,971	1	0	1	88	4,967	1	0	2	110	5,005	1	0	2	111	3,179	1	0	1	71
			TFTM	3,925	1	0	2	87	4,910	1	0	2	109	4,947	1	0	2	110	3,143	1	0	1	70
			T5VS	4,095	2	0	0	91	5,122	2	0	0	114	5,161	2	0	0	115	3,278	2	0	0	73
			T5S	4,157	2	0	0	92	5,200	2	0	0	116	5,239	2	0	0	116	3,328	2	0	0	74
			T5M	4,107	3	0	1	91	5,138	3	0	1	114	5,177	3	0	1	115	3,288	2	0	1	73
			T5W	4,116	3	0	1	91	5,148	3	0	1	114	5,187	3	0	1	115	3,295	2	0	1	73
	1000 mA	72 W	T1S	5,387	1	0	1	75	6,739	2	0	2	94	6,790	2	0	2	94					
			T2S	5,488	1	0	1	76	6,865	2	0	2	95	6,917	2	0	2	96					
			T2M	5,382	1	0	2	75	6,733	2	0	2	94	6,784	2	0	2	94					
			T3S	5,423	1	0	1	75	6,784	2	0	2	94	6,835	2	0	2	95					
			T3M	5,475	1	0	2	76	6,850	2	0	2	95	6,901	2	0	2	96					
			T4M	5,447	1	0	2	76	6,814	2	0	2	95	6,866	2	0	2	95					
			TFTM	5,385	1	0	2	75	6,736	1	0	2	94	6,787	1	0	2	94					
			T5VS	5,617	2	0	0	78	7,027	3	0	0	98	7,080	3	0	0	98					
			T5S	5,702	2	0	0	79	7,133	2	0	0	99	7,187	2	0	0	100					
			T5M	5,634	3	0	1	78	7,048	3	0	1	98	7,101	3	0	1	99					
			T5W	5,646	3	0	1	78	7,063	3	0	2	98	7,116	3	0	2	99					
40C (40 LEDs)	530 mA	68 W	T1S	6,093	2	0	2	90	7,622	2	0	2	112	7,679	2	0	2	113	4,878	1	0	1	72
			T2S	6,207	2	0	2	91	7,764	2	0	2	114	7,823	2	0	2	115	4,969	1	0	1	73
			T2M	6,087	2	0	2	90	7,615	2	0	2	112	7,672	2	0	2	113	4,874	1	0	1	72
			T3S	6,133	1	0	2	90	7,672	2	0	2	113	7,730	2	0	2	114	4,910	1	0	1	72
			T3M	6,193	2	0	2	91	7,747	2	0	2	114	7,805	2	0	2	115	4,958	1	0	2	73
			T4M	6,161	1	0	2	91	7,707	2	0	2	113	7,765	2	0	2	114	4,932	1	0	2	73
			TFTM	6,090	1	0	2	90	7,618	2	0	2	112	7,676	2	0	2	113	4,876	1	0	2	72
			T5VS	6,353	2	0	0	93	7,947	3	0	0	117	8,007	3	0	0	118	5,086	2	0	0	75
			T5S	6,449	2	0	0	95	8,068	3	0	1	119	8,128	3	0	1	120	5,163	2	0	0	76
			T5M	6,372	3	0	1	94	7,971	3	0	2	117	8,031	3	0	2	118	5,102	3	0	1	75
			T5W	6,385	3	0	2	94	7,988	3	0	2	117	8,048	3	0	2	118	5,112	3	0	1	75
	700 mA	91 W	T1S	7,752	2	0	2	85	9,697	2	0	2	107	9,770	2	0	2	107	6,206	2	0	2	68
			T2S	7,897	2	0	2	87	9,878	2	0	2	109	9,953	2	0	2	109	6,322	2	0	2	69
			T2M	7,745	2	0	2	85	9,688	2	0	2	106	9,761	2	0	2	107	6,201	2	0	2	68
			T3S	7,803	2	0	2	86	9,761	2	0	2	107	9,834	2	0	2	108	6,247	1	0	2	69
			T3M	7,879	2	0	2	87	9,856	2	0	2	108	9,930	2	0	2	109	6,308	2	0	2	69
			T4M	7,838	2	0	2	86	9,805	2	0	2	108	9,879	2	0	2	109	6,275	1	0	2	69
			TFTM	7,748	2	0	2	85	9,693	2	0	3	107	9,765	2	0	3	107	6,203	1	0	2	68
			T5VS	8,083	3	0	0	89	10,111	3	0	1	111	10,187	3	0	1	112	6,569	2	0	0	72
			T5S	8,205	3	0	1	90	10,264	3	0	1	113	10,341	3	0	1	114	6,569	2	0	0	72
			T5M	8,107	3	0	2	89	10,142	3	0	2	111	10,218	3	0	2	112	6,491	3	0	1	71
			T5W	8,124	3	0	2	89	10,163	4	0	2	112	10,239	4	0	2	113	6,504	3	0	2	71
	1000 mA	138 W	T1S	10,435	2	0	2	76	13,054	3	0	3	95	13,152	3	0	3	95					
			T2S	10,630	2	0	2	77	13,297	3	0	3	96	13,398	3	0	3	97					
			T2M	10,426	2	0	2	76	13,042	3	0	3	95	13,140	3	0	3	95					
			T3S	10,503	2	0	2	76	13,139	2	0	2	95	13,238	2	0	2	96					
			T3M	10,606	2	0	2	77	13,267	3	0	3	96	13,367	3	0	3	97					
			T4M	10,551	2	0	2	76	13,199	3	0	3	96	13,298	3	0	3	96					
			TFTM	10,430	2	0	3	76	13,047	2	0	3	95	13,146	2	0	3	95					
			T5VS	10,881	3	0	1	79	13,611	3	0	1	99	13,714	4	0	1	99					
			T5S	11,045	3	0	1	80	13,817	3	0	1	100	13,921	3	0	1	101					
			T5M	10,914	4	0	2	79	13,652	4	0	2	99	13,755	4	0	2	100					
			T5W	10,936	4	0	2	79	13,680	4	0	2	99	13,783	4	0	2	100					

Performance Data

L90 and R90 Rotated Optics

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30C (30 LEDs)	530 mA	52 W	T1S	4,797	2	0	2	92	6,001	2	0	2	115	6,046	2	0	2	116	3,841	2	0	2	74
			T2S	4,887	2	0	2	94	6,113	2	0	2	118	6,159	3	0	3	118	3,912	2	0	2	75
			T2M	4,793	2	0	2	92	5,996	3	0	3	115	6,041	3	0	3	116	3,837	2	0	2	74
			T3S	4,829	2	0	2	93	6,041	3	0	3	116	6,086	3	0	3	117	3,866	2	0	2	74
			T3M	4,876	3	0	3	94	6,099	3	0	3	117	6,145	3	0	3	118	3,904	2	0	2	75
			T4M	4,851	3	0	3	93	6,068	3	0	3	117	6,114	3	0	3	118	3,884	2	0	2	75
			TFTM	4,795	3	0	3	92	5,998	3	0	3	115	6,043	3	0	3	116	3,839	2	0	2	74
			T5VS	5,002	2	0	0	96	6,258	2	0	0	120	6,305	2	0	0	121	4,005	2	0	0	77
			T5S	5,078	2	0	0	98	6,352	2	0	0	122	6,400	2	0	0	123	4,065	2	0	0	78
			T5M	5,017	3	0	1	96	6,276	3	0	1	121	6,324	3	0	1	122	4,017	2	0	1	77
			T5W	5,028	3	0	1	97	6,289	3	0	2	121	6,337	3	0	2	122	4,025	3	0	1	77
	700 mA	70 W	T1S	5,975	2	0	2	85	7,474	3	0	3	107	7,530	3	0	3	108	4,783	2	0	2	68
			T2S	6,086	2	0	2	87	7,614	3	0	3	109	7,671	3	0	3	110	4,873	2	0	2	70
			T2M	5,969	3	0	3	85	7,467	3	0	3	107	7,524	3	0	3	107	4,779	2	0	2	68
			T3S	6,014	3	0	3	86	7,523	3	0	3	107	7,580	3	0	3	108	4,815	2	0	2	69
			T3M	6,072	3	0	3	87	7,596	3	0	3	109	7,654	3	0	3	109	4,862	3	0	3	69
			T4M	6,041	3	0	3	86	7,557	3	0	3	108	7,614	3	0	3	109	4,837	3	0	3	69
			TFTM	5,972	3	0	3	85	7,471	3	0	3	107	7,527	3	0	3	108	4,781	3	0	3	68
			T5VS	6,230	2	0	0	89	7,793	3	0	0	111	7,852	3	0	0	112	4,988	2	0	0	71
			T5S	6,324	2	0	0	90	7,911	3	0	1	113	7,971	3	0	1	114	5,063	2	0	0	72
			T5M	6,249	3	0	1	89	7,817	3	0	2	112	7,876	3	0	2	113	5,003	3	0	1	71
			T5W	6,262	3	0	2	89	7,833	3	0	2	112	7,892	3	0	2	113	5,013	3	0	1	72
	1000 mA	104 W	T1S	7,956	3	0	3	76	9,952	3	0	3	96	10,027	3	0	3	96					
			T2S	8,104	3	0	3	78	10,138	3	0	3	97	10,214	3	0	3	98					
			T2M	7,949	3	0	3	76	9,943	3	0	3	96	10,018	3	0	3	96					
			T3S	8,008	3	0	3	77	10,018	3	0	3	96	10,093	3	0	3	97					
			T3M	8,086	3	0	3	78	10,115	4	0	4	97	10,191	4	0	4	98					
			T4M	8,044	3	0	3	77	10,063	3	0	3	97	10,139	3	0	3	97					
			TFTM	7,952	3	0	3	76	9,948	3	0	3	96	10,022	4	0	4	96					
			T5VS	8,296	3	0	0	80	10,377	3	0	1	100	10,455	3	0	1	101					
			T5S	8,421	3	0	1	81	10,534	3	0	1	101	10,613	3	0	1	102					
			T5M	8,321	3	0	2	80	10,409	4	0	2	100	10,487	4	0	2	101					
			T5W	8,338	4	0	2	80	10,430	4	0	2	100	10,509	4	0	2	101					

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.8 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 4000 K (70 minimum CRI) or optional 3000 K (80 minimum CRI) or 5000 K (70 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L96/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV or 6kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 0 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERIS™ series pole drilling pattern. Optional terminal block, tool-less entry, and NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
Five-year limited warranty. Full warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

TYPE S20

Inverted available with WLU option only.

WST LED
Architectural Wall Sconce

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The classic Architectural Wall Sconce is now available with the latest in LED technology. The result is a long-life, maintenance-free product with typical energy savings of 75% compared to metal halide versions. The integral battery backup option provides emergency egress lighting, without the use of a back-box or remote gear, so installations maintain their aesthetic integrity.

The WST LED is ideal for replacing existing 50 – 175W metal halide wall-mounted products. The expected service life is 20+ years of nighttime use.

Specifications

Luminaire

Height: 7-1/4" *(18.4 cm)*

Width: 16-1/4" *(41.3 cm)*

Depth: 9-1/8" *(23.2 cm)*

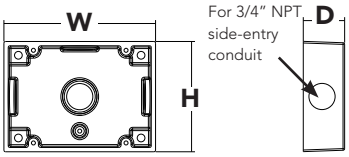
Weight: 17 lbs *(7.7 kg)*

Optional Back Box (BBW)

Height: 4" *(10.2 cm)*

Width: 5-1/2" *(14.0 cm)*

Depth: 1-1/2" *(3.8 cm)*



Ordering Information

EXAMPLE: WST LED 2 10A700/40K SR3 MVOLT DDBTXD

WST LED							
Series	**Light Engines**	**Performance Package**	**Distribution**	**Voltage**	**Mounting**	**Options[3]**	**Finish *(required)***
WST LED	1 One engine (10 LEDs) 2 Two engines (20 LEDs)	**700 mA options:** 10A700/30K 3000K 10A700/40K 4000K 10A700/50K 5000K	SR2 Type II SR3 Type III SR4 Type IV	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1] 347 480	**Shipped included** (blank) Surface mount **Shipped separately** [2] BBW Surface-mounted back box UT5 Uptilt 5 degrees	**Shipped installed** PE Photoelectric cell, button type [4,5] SF Single fuse (120, 277, 347V) [4] DF Double fuse (208, 240, 480V) [4] DMG 0-10V dimming driver (no controls) ELCW Emergency battery backup [6] WLU Wet location door for up orientation [7] PIR Motion/ambient light sensor [8] DS Dual switching [9] **Shipped separately** VG Vandal guard WG Wire guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

Emergency Battery Operation

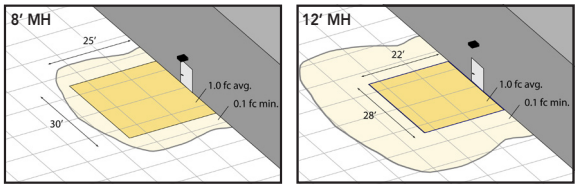
The emergency battery backup (ELCW option) is integral to the luminaire - no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product.

All ELCW configurations include an independent secondary driver with an integral relay to immediately detect AC power loss. Dual light engines are wired in parallel so both engines operate in emergency mode and provide additional component redundancy. These design features meet various interpretations of NFPA 70/NEC 2008 - 700.16

The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time supply power is lost, per International Building Code Section 1006 and NFPA 101 Life Safety Code Section 7.9, provided luminaires are mounted at an appropriate height and illuminate an open space with no major obstructions.

The examples below show illuminance of 1 fc average and 0.1 fc minimum of the single-engine Type IV product in emergency mode.

WST LED 1 10A700/40K SR4
MVOLT ELCW
10' x 10' Gridlines
8' and 12' Mounting Height



NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with photocell (PE), fusing (SF, DF), or dual switching (DS).
2. May also be ordered separately as an accessory. Ex: WSBBW DDBXD U. Must specify finish.
3. Must be ordered with fixture; cannot be field installed.
4. Not available with MVOLT option. Button photocell (PE) can be ordered with a dedicated voltage option. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
5. Not available with 480V option. Not available with motion/ambient light sensor (PIR).
6. Integral battery pack is rated for -20° to 60°C operating temperature. ELCW warranty is 3-year period. Not available with 347V or 480V. Not available with WLU.
7. WLU not available with PIR or ELCW.
8. Specifies the SensorSwitch SFOD-7-ODP control (photocell included); see Motion Sensor Guide for details. Includes ambient light sensor. Not available with "PE" option (button type photocell). Dimming driver standard. Not available with WLU, VG or WG.
9. Provides 50/50 luminaire operation via two independent drivers and light engines on two separate circuits. Not available with one engine, MVOLT, ELCW, WLU, SF, or DF. Must specify voltage; voltage must be the same for both drivers. When ordered with photocell (PE) or motion sensor (PIR), only the primary power source leads will be controlled.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Light Engines	Drive Current (mA)	Performance Package	System Watts (MVOLT[1])	Dist. Type	40K (4000K, 70 CRI)				
					Nominal Lumens	B	U	G	LPW
1 (10 LEDs)	700	10A700/--K	24W	SR2	2,005	1	0	1	84
				SR3	2,029	1	0	1	84
				SR4	1,959	1	0	1	82
2 (20 LEDs)	700	10A700/--K	47W	SR2	3,944	1	0	1	84
				SR3	4,028	1	0	1	86
				SR4	3,851	1	0	1	82

1 See electrical load chart for 347/480V system watts.

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.10
10°C	50°F	1.06
20°C	68°F	1.02
25°C	**77°F**	**1.00**
30°C	86°F	0.98
40°C	104°F	0.92

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **WST LED 2 10A700** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.94	0.88	0.77

Electrical Load

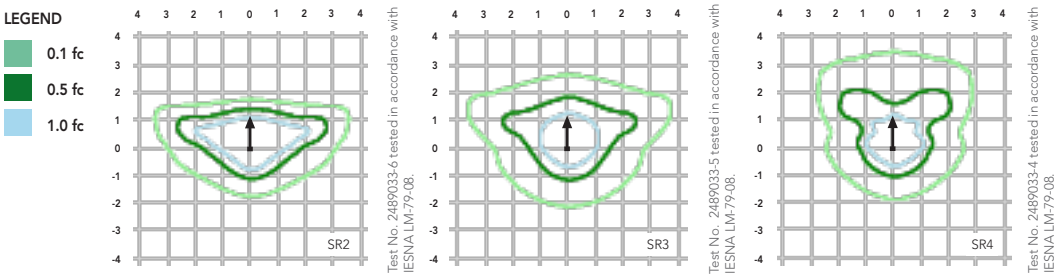
Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1	700	24W	0.24	0.14	0.12	0.1	-	-
		29W[1]	-	-	-	-	0.09	0.07
2	700	47W	0.44	0.27	0.23	0.20	-	-
		53W[1]	-	-	-	-	0.17	0.12

1 Higher wattage is due to electrical losses from step-down transformer.

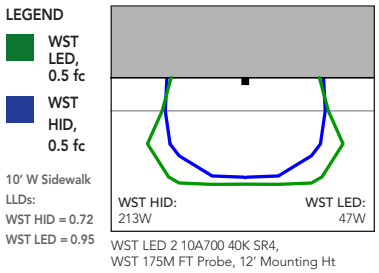
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's WST LED homepage.

Isofootcandle plots for the WST LED 2 10A700/40K SR2, SR3, and SR4. Distances are in units of mounting height (12').



Distribution overlay comparison to 175W metal halide.



WST LED 2 10A700 40K SR4, WST 175M FT Probe, 12' Mounting Ht

FEATURES & SPECIFICATIONS

INTENDED USE

The classic architectural shape of the WST LED was designed for applications such as hospitals, schools, malls, restaurants, and commercial buildings. The long life LEDs and driver make this luminaire nearly maintenance-free.

CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Precision-molded acrylic lenses are engineered for superior distribution, uniformity, and spacing in wall-mount applications. Light engines are 4000K (70 CRI). The WST LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal core circuit board and integral aluminum heat sinks to maximize heat dissipation and promote long life (100,000 hrs at 25°C, L77). Class 2 electronic driver has a power factor >90%, THD <20%. Easily-serviceable surge protection device meets a minimum Category B (per ANSI/IEEE C62.41.2).

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated and suitable for wet locations when mounted with the lenses down. WLU option offers wet location listing in "up" orientation. Rated for -30°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

MECHANICAL YARD/WASTE

TWS LED
LED Wall Luminaire

Catalog Number

Notes

Type S21

Hit the Tab key or mouse over the page to see all interactive elements.

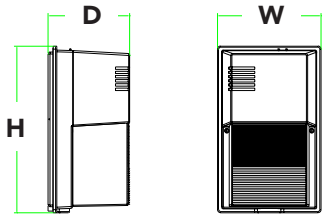
Specifications

Width: 6-3/4" *(17.2 cm)*

Height: 10-7/8" *(27.7 cm)*

Depth: 5-5/16" *(13.5 cm)*

Weight: 3.19 lbs *(1.45 kg)*



Introduction

The popular TWS luminaire is now available with long-lasting, energy-efficient LED technology. Featuring a classic dayform, the TWS LED offers a traditional appearance and is powered by advanced LEDs.

The TWS LED luminaire is powerful yet energy efficient, capable of replacing up to a 70W HPS wall pack while saving up to 78% in energy costs. With long-life LEDs, the TWS LED eliminates frequent lamp and ballast replacements associated with traditional technologies.

Ordering Information

EXAMPLE: TWS LED 1 50K 120 PE

TWS LED											
Series	**Performance Package**		**Color Temperature**		**Voltage**		**Control Options**		**Finish**	
TWS LED	1	1017 lumens	50K	5000K [1]	120	120V [2]	PE	Photoelectric cell, button type	(blank)	Dark bronze

Accessories

Ordered and shipped separately.

TWSWG Wire Guard

NOTES

1. Corrected color temperature (CCT) shown is nominal per ANSI C78, 377-2008.
2. 120V driver operates on 120V.

FEATURES & SPECIFICATIONS

INTENDED USE
The TWS LED combines traditional wall pack design with high-output LEDs to provide an energy-efficient, low maintenance LED wall pack suitable for replacing up to 70W HPS fixtures. The traditional shape helps maintain building aesthetics when replacing only a portion of your building's wall packs. TWS LED is for outdoor applications such as personnel doors, loading areas, driveways and parking areas.

CONSTRUCTION
Back plate is die-cast aluminum. Front cover is impact-resistant polycarbonate which is fully gasketed. All electronics are protected in the upper housing. Housing is sealed against moisture and environmental contaminants.

FINISH
UV stabilized polycarbonate front cover has dark bronze color which provides superior resistance to corrosion and weathering and that can withstand extreme climate changes without cracking or peeling.

OPTICS
Protective polycarbonate lens covers the LEDs. Prismatic front cover and precision-molded reflector for superior uniformity and fixture spacing. Light engine is available in 5000K (69 min. CRI).

ELECTRICAL
Light engine consists of two high-powered, long-life, high-efficacy LEDs mounted on an internal aluminum heat sink to maximize heat dissipation and promote long life (L95/100,000 hours at 40°C). Driver and integral photocell operate at 120V and are fully enclosed in the upper housing. There are no user serviceable parts.

INSTALLATION
Back housing easily mounts to any recessed junction box. With all electronics in upper housing the open lower section makes wiring easy. Mount on any vertical surface. Not recommended in applications where a sprayed stream of water can come in direct contact with polycarbonate lens.

LISTINGS
UL Certified to US and Canadian safety standards for wet-location mounting higher than 4 feet off the ground.

Rated for -40°C to 40°C ambient temperature.

WARRANTY
Five-year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications are subject to change without notice. Actual performance may differ as a result of end-user environment and application

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application.

Performance Package	Drive Current (mA)	CCT	System Watts	50K (5000K, 67 CRI)				
				Lumens	B	U	G	LPW
1	900	5000K	19W	1,017	1	3	1	54

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
40°C	104°F	0.98

Electrical Load

LED Package	Drive Current (mA)	System Watts	Current (A)			
			120	208	240	277
1	1000	19W	0.20	0.12	0.10	0.09

Projected LED Lumen Maintenance

Data references the extrapolated performance projections in a **40°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	55,000	100,000
Lumen Maintenance Factor	1.0	0.98	0.97	0.97	0.95

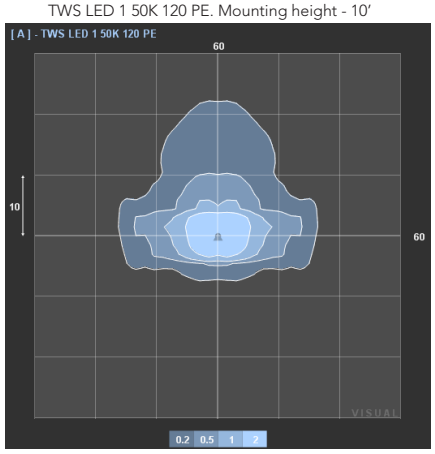
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting TWS LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards

TWS LED 1 50K 120 PE. Mounting height - 10'

LEGEND

- 0.2 fc
- 0.5 fc
- 1.0 fc
- 2.0 fc



Test No. LTL226725 tested in accordance with IESNA LM-79-08.

Lighting Facts Labels